PERMIT INSTRUCTIONS
PURSUANT TO
REGULATIONS FOR THE CONTROL AND ABATEMENT OF AIR POLLUTION

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

AIR PERMITS
FORM 7 INSTRUCTIONS

NEW SOURCE REVIEW PERMITS
and STATE OPERATING PERMITS

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I. Complete Application

This is an application form for a new source review permit or a state operating permit. The staff of the Department of Environmental Quality reviews all permit applications to determine compliance with State Regulations. The evaluation of a permit application is a detailed and lengthy process, so your application should be submitted as soon as you can furnish the requisite information. A complete application is required prior to our commencing the process of preparing a permit. Once you have submitted a complete application we process your application as quickly as possible. To expedite the permit application and review process, please supply the information requested on the attached form accurately and completely.

A complete application must include:

1.	***Form 7***	A completed Form 7, including a properly signed Document Certification Form.
2.	***Map****	A Source location map that includes latitude and longitude coordinates for the facility.
3.	***Facility****	A site plan of the facility including the dimensions of all buildings (length, width and height), all stack and emission point locations by stack number, and the property lines and fence lines.
4.	***Process****	A process flow diagram/schematic, a narrative process description and a material balance that reflects the requested permit limits.
5.	***MSDS or CPDS****	Material Safety Data Sheets or Certified Product Data Sheets indicating the percent by weight of each ingredient and, for coatings, the VOC content in pounds per gallon.
6.	***Calculations***	Calculations of emission estimates. Control technology justification to include economic analysis, if required.
7.	***Stack Test****	Stack test data if applicable.
8.	***Modeling****	Air quality modeling based on consultation with the applicable regional office and the Office of Air Permit Programs, if required.
9.	***Local Governing* Body Certification Form***	Forward the form to local governing body, if applicable.
10.	***Permit Application Fee Form***	For an undeveloped new major source permit or a major modification permit, include a copy of the Permit Application Fee form and check or money order with application, if required.

*Not required for state operating permit applications unless specifically requested.

INSTRUCTIONS ARE PROVIDED FOR EACH PAGE OF THE FORM 7. Should you require additional assistance in completing this application, please contact the regional office for your area as shown on the map and localities list on pages 4-7. Submit the completed application to the appropriate regional office.

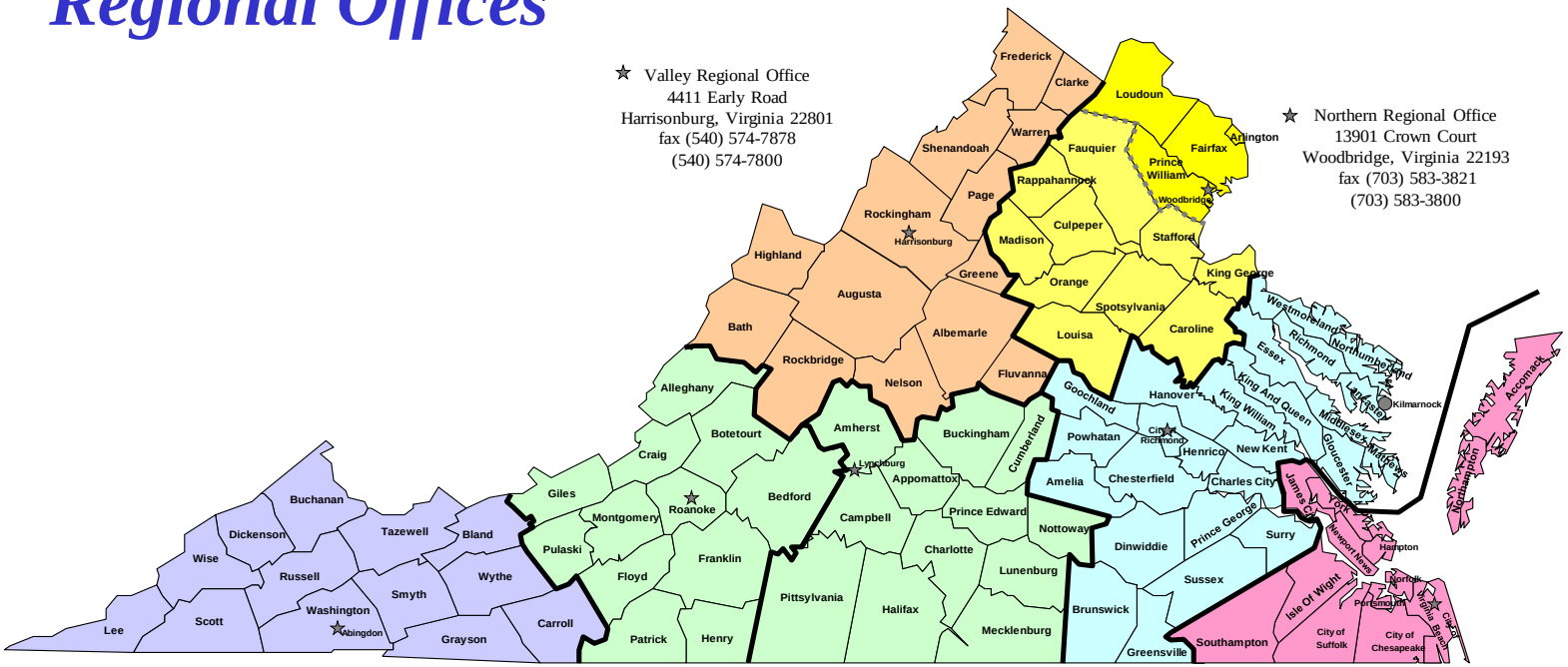
IT IS A VIOLATION OF STATE REGULATIONS TO BEGIN CONSTRUCTION OF OR OPERATE A SOURCE WITHOUT OBTAINING A PERMIT, IF A PERMIT IS REQUIRED

****Note:** The Form 7 is available in MS Word and Adobe pdf formats on the DEQ website at www.deq.virginia.gov

II. Regional Offices

DEPARTMENT OF ENVIRONMENTAL QUALITY

Regional Offices



☆ Valley Regional Office
4411 Early Road
Harrisonburg, Virginia 22801
fax (540) 574-7878
(540) 574-7800

☆ Northern Regional Office
13901 Crown Court
Woodbridge, Virginia 22193
fax (703) 583-3821
(703) 583-3800

☆ Southwest Regional Office
355 Deadmore St.
Abingdon, Virginia 24212
fax (276) 676-4899
(276) 676-4800

☆ Blue Ridge Regional Offices
7705 Timberlake Road
Lynchburg, Virginia 24502
fax (434) 582-5125
(434) 582-5120

☆ 3019 Peters Creek Rd.
Roanoke, Virginia 24019
Fax (540) 562-6725
(540) 562-6700

☆ Piedmont Regional Office
4949-A Cox Road
Glen Allen, Virginia 23060
fax (804) 527-5106
(804) 527-5020

☆ Tidewater Regional Office
5636 Southern Blvd.
Virginia Beach, Virginia 23462
fax (757) 518-2009
(757) 518-2000

A. By County

County	Region
Accomack	TRO
Albemarle	VRO
Alleghany	BRRO
Amelia	PRO
Amherst	BRRO
Appomattox	BRRO
Arlington	NRO
Bath	VRO
Bedford	BRRO
Bland	SWRO
Botetourt	BRRO
Bristol	SWRO
Brunswick	PRO
Buchanan	SWRO
Buckingham	BRRO
Campbell	BRRO
Caroline	NRO
Carroll	SWRO
Charles City	PRO
Charlotte	BRRO
Chesapeake	TRO
Chesterfield	PRO
Clarke	VRO
Craig	BRRO
Culpeper	NRO
Cumberland	BRRO
Dickenson	SWRO
Dinwiddie	PRO
Essex	PRO
Fairfax	NRO
Fauquier	NRO
Floyd	BRRO
Fluvanna	VRO
Franklin	BRRO
Frederick	VRO
Giles	BRRO
Gloucester	PRO
Goochland	PRO
Grayson	SWRO
Greene	VRO
Greensville	PRO
Halifax	BRRO
Hampton	TRO
Hanover	PRO
Henrico	PRO
Henry	BRRO
Highland	VRO
Isle of Wight	TRO
James City	TRO

County	Region
King and Queen	PRO
King George	NRO
King William	PRO
Lancaster	PRO
Lee	SWRO
Loudoun	NRO
Louisa	NRO
Lunenburg	BRRO
Madison	NRO
Mathews	PRO
Mecklenburg	BRRO
Middlesex	PRO
Montgomery	BRRO
Nelson	VRO
New Kent	PRO
Northampton	TRO
Northumberland	PRO
Norton	SWRO
Nottoway	BRRO
Orange	NRO
Page	VRO
Patrick	BRRO
Pittsylvania	BRRO
Powhatan	PRO
Prince George	PRO
Prince Edward	BRRO
Prince William	NRO
Pulaski	BRRO
Rappahannock	NRO
Richmond	PRO
Roanoke	BRRO
Rockbridge	VRO
Rockingham	VRO
Russell	SWRO
Scott	SWRO
Shenandoah	VRO
Smyth	SWRO
Southampton	TRO
Spotsylvania	NRO
Stafford	NRO
Surry	PRO
Sussex	PRO
Tazewell	SWRO
Warren	VRO
Washington	SWRO
Westmoreland	PRO
Wise	SWRO
Wythe	SWRO
York	TRO

BRRO – Blue Ridge Regional Office	SWRO – Southwest Regional Office
NRO – Northern Regional Office	TRO – Tidewater Regional Office
PRO – Piedmont Regional Office	VRO – Valley Regional Office

B. By City/Locality

City/Locality	Region
Accomac	TRO
Achilles	PRO
Adner	PRO
Alberta	PRO
Alexandria	NRO
Allmondsville	PRO
Amelia Courthouse	PRO
Ark	PRO
Arlington	NRO
Ashland	PRO
Aylett	PRO
Bacon's Castle	PRO
Ballsville	PRO
Barhamsville	PRO
Bavon	PRO
Beach	PRO
Beaverdam	PRO
Bedford	BRRO
Belle Haven	TRO
Bensley	PRO
Bertrand	PRO
Big Stone Gap	SWRO
Blacksburg	BRRO
Bland	SWRO
Bloxom	TRO
Bon Air	PRO
Boones Mill	BRRO
Bottoms Bridge	PRO
Bowlers Wharf	PRO
Brays Fork	PRO
Brodnax	PRO
Brunswick	PRO
Buchanan	BRRO
Buena Vista	VRO
Burgess	PRO
Burrowsville	PRO
Butylo	PRO
Cabin Point	PRO
Callao	PRO
Cape Charles	TRO
Caret	PRO
Carson	PRO
Cartersville	PRO
Center Cross	PRO
Central Garage	PRO
Champlain	PRO
Charles City	PRO
Charlottesville	VRO
Cheriton	TRO
Chesapeake	TRO
Chester	PRO
Chesterfield	PRO
Chilhowie	SWRO
Chincoteague	TRO
Christiansburg	BRRO

City/Locality	Region
Chula	PRO
Church View	PRO
Claremont	PRO
Clintwood	SWRO
Coatesville	PRO
Cobbs Creek	PRO
Cochran	PRO
Coeburn	SWRO
Coles Point	PRO
Collinsville	BRRO
Colonial Beach	PRO
Colonial Heights	PRO
Columbia	PRO
Covington	BRRO
Crozier	PRO
Daleville	BRRO
Damascus	SWRO
Danieltown	PRO
Danville	BRRO
Darvills	PRO
Deltaville	PRO
Dendron	PRO
DeWitt	PRO
Dinwiddie	PRO
Disputanta	PRO
Doswell	PRO
Dublin	BRRO
Dunnsville	PRO
Eagle Rock	BRRO
Eastville	TRO
Ebony	PRO
Edgerton	PRO
Elberon	PRO
Emporia	PRO
Ettrick	PRO
Exmore	TRO
Fair Port	PRO
Fairfax	NRO
Falls Church	NRO
Farnham	PRO
Fife	PRO
Fincastle	BRRO
Fleeton	PRO
Floyd	BRRO
Ford	PRO
Franklin	TRO
Fredericksburg	NRO
Galax	SWRO
Gasburg	PRO
George's Tavern	PRO
Glade Spring	SWRO
Glen Allen	PRO
Glenns	PRO
Gloucester	PRO
Gloucester Point	PRO

City/Locality	Region
Goochland	PRO
Gray	PRO
Gressitt	PRO
Greys Point	PRO
Grundy	SWRO
Gum Spring	PRO
Gwynn	PRO
Hadensville	PRO
Hague	PRO
Hallwood	TRO
Hampton	TRO
Hanover	PRO
Harrisonburg	VRO
Hartfield	PRO
Haynesville	PRO
Haysi	SWRO
Heathsville	PRO
Highland Springs	PRO
Hillsville	SWRO
Holdcroft	PRO
Hollins	BRRO
Homeville	PRO
Hopewell	PRO
Hull Neck	PRO
Independence	SWRO
Irvington	PRO
Jarratt	PRO
Jetersville	PRO
Jonesville	SWRO
Keller	TRO
Kilmarnock	PRO
King & Queen	PRO
King William	PRO
Kinsale	PRO
Lakeside	PRO
Lancaster	PRO
Lanexa	PRO
Laurel	PRO
Lawrenceville	PRO
Lebanon	SWRO
Leedstown	PRO
Lerty	PRO
Lewisetta	PRO
Lexington	VRO
Lilian	PRO
Littleton	PRO
Litwalton	PRO
Lively	PRO
Loretto	PRO
Lottsburg	PRO
Low Moor	BRRO
Lyells	PRO
Lynchburg	BRRO
Maidens	PRO
Manakin-Sabot	PRO

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NRO – Northern Regional Office	TRO – Tidewater Regional Office
PRO – Piedmont Regional Office	VRO – Valley Regional Office

By City/Locality (Continued)

City/Locality	Region
Manassas	NRO
Manassas Park	NRO
Mangohick	PRO
Mannboro	PRO
Manquin	PRO
Marion	SWRO
Martinsville	BRRO
Matoaca	PRO
Matthews	PRO
McKenney	PRO
Meadows of Dan	BRRO
Mechanicsville	PRO
Melfa	TRO
Midlothian	PRO
Millers Tavern	PRO
Mobjack	PRO
Moneta	BRRO
Montpelier	PRO
Montross	PRO
Moon	PRO
Morattico	PRO
Morven	PRO
Moseley	PRO
Mount Holly	PRO
Mundy Point	PRO
Narrows	BRRO
Nassawadox	TRO
Naxera	PRO
New Castle	BRRO
New Kent	PRO
New Point	PRO
Newport	BRRO
Newport News	TRO
Newtown	PRO
Norfolk	TRO
Nuttsville	PRO
Oak Grove	PRO
Oilville	PRO
Old Church	PRO
Onancock	TRO
Onley	TRO
Painter	TRO
Parksley	TRO
Pearisburg	BRRO
Petersburg	PRO
Poquoson	TRO
Portsmouth	TRO
Potomac Beach	PRO
Powhatan	PRO
Prince George	PRO
Providence Forge	PRO
Pulaski	BRRO
Purdy	PRO
Radford	BRRO
Reedville	PRO

City/Locality	Region
Remlik	PRO
Richlands	SWRO
Richmond, City of	PRO
Ridgeway	BRRO
Ripplemead	BRRO
Roanoke	BRRO
Rock Castle	PRO
Rockville	PRO
Rocky Mount	BRRO
Roxbury	PRO
Rural Retreat	SWRO
Saint Stevens Church	PRO
Salem	BRRO
Saluda	PRO
Sandston	PRO
Sandy Point	PRO
Saxis	TRO
Scotland	PRO
Scotts Fork	PRO
Severn	PRO
Shackelfords	PRO
Sharps	PRO
Short Pump	PRO
Skippers	PRO
Smith Point	PRO
Spring Grove	PRO
Staunton	VRO
Stevensville	PRO
Stingray Point	PRO
Stony Creek	PRO
Stratford Hall	PRO
Stuart	BRRO
Studley	PRO
Suffolk	TRO
Surry	PRO
Sussex	PRO
Sutherland	PRO
Tabscott	PRO
Talleysville	PRO
Tangier Island	TRO
Tappahannock	PRO
Tazewell	SWRO
Templeman	PRO
Trenholm	PRO
Troutville	BRRO
Urbana	PRO
Valentines	PRO
Varina	PRO
Village	PRO
Vinton	BRRO
Virginia Beach	TRO
Wachapreague	TRO
Wakefield	PRO
Walkerton	PRO
Walnut Point	PRO

City/Locality	Region
Ware Neck	PRO
Wares Wharf	PRO
Warner	PRO
Warsaw	PRO
Water View	PRO
Waverly	PRO
Waynesboro	VRO
Weems	PRO
West Point	PRO
White Stone	PRO
White Marsh	PRO
White Plains	PRO
Wicomico Church	PRO
Williamsburg	TRO
Wilsons	PRO
Winchester	VRO
Windmill Point	PRO
Winterpock	PRO
Wise	SWRO
Wytheville	SWRO
Yale	PRO

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III. Confidential Information

****NOTE: If your facility is considering confidential information, please contact your DEQ regional office and follow DEQ Guidance on Confidentiality located at http://www.deq.virginia.gov/air/justforms.html**

Under the Virginia Freedom of Information Act (FOIA) (*Virginia Code* Title 2.2, Chapter 37) and by regulation (9 VAC 5-170-60), all information submitted by the applicant is available to anyone requesting the information unless it is certified by the applicant as meeting all of the criteria listed in 9 VAC 5-170-60 C:

"In order to be exempt from disclosure to the public under subsection B of this section, the record, report or information must satisfy the following criteria:

1. *Information for which the company has been taking and will continue to take measures to protect the confidentiality;*
2. *Information that has not been and is not presently reasonably obtainable without the company's consent by private citizens or other firms through legitimate means other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding;*
3. *Information which is not publicly available from sources other than the company; and*
4. *Information the disclosure of which would cause substantial harm to the company."*

However, emissions data shall be available to the public without exception (9 VAC 5-170-60 A). Emissions data include those data meeting the definition found in federal regulations at 40 CFR 2 Sec. 2.301, which states:

"Emission data means, with reference to any source of emission of any substance into the air--

A. *Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which has been emitted by the source (or of any pollutant resulting from any emission by the source), or any combination of the foregoing;*
B. *Information necessary to determine the identity, amount, frequency, concentration, or other characteristics (to the extent related to air quality) of any emission which, under an applicable standard or limitation, the source was authorized to emit (including, to the extent necessary for such purposes, a description of the manner or rate of operation of the source); and*
C. *A general description of the location and/or nature of the source to the extent necessary to identify the source and to distinguish it from other sources (including, to the extent necessary for such purposes, a description of the device, installation, or operation constituting the source)."*

Applicants should consider the "information necessary to determine…" language in the definition, which can include information on throughputs, heat rates, emissions factors, and other characteristics required to derive information on actual or authorized emissions.

In order for DEQ to accept a claim of confidentiality, the applicant must do all of the following:

- Prepare both confidential and non-confidential versions of the application;

  The front page of the confidential copy and any subsequent pages containing confidential information should be labeled or stamped "Confidential," "Proprietary," or "Trade Secret."

  The public version should indicate which information or data have been removed or blacked out due to confidentiality by labeling those parts or elements of the application as confidential. If an entire page is confidential, there should be a corresponding non-confidential page describing the type of information held confidential, for instance, "Process Flow Diagram (confidential)."

  The non-confidential version of the application should be structured so that the permit can be written from the information provided in that version. If this is not feasible then the reasons should be documented in the showing provided with the application. DEQ regional offices can provide a copy of the DEQ Air Permitting Confidentiality Policy, which discusses some approaches to structuring applications so that the permit can reflect the non-confidential information.

- Remove only confidential information

  If a page contains both confidential and non-confidential information, the public version must contain all of the non-confidential information. The applicant may not remove all the information on a page or application section or part because some of the information is confidential.

- Refrain from confidentiality claims for emission data that cannot be held confidential
  Information necessary to determine emissions or what the source is authorized to emit cannot be held confidential.

- Prepare and certify a showing document for all information claimed as confidential and has been removed or omitted from the public version of the application.

  The applicant must prepare a document showing that each type of information or data claimed as confidential meets the criteria of 9 VAC 5-170-60 C as discussed above. The showing document is itself public information subject to FOIA, so the applicant should not include confidential information in the showing document. The applicant must certify the showing.

  The showing should follow the format of the example provided below. The certification must contain the wording found in the example.

Example Showing

Throughout the referenced application, XYZ Company claims throughputs of Equipment A, B, and C and composition information of our final blended products as confidential.

Throughputs

XYZ protects the confidentiality of this information by:
- Keeping the information under lock and key except when designated employees have need of its use.
- Allowing only those employees who have a "need to know" access to this information. Other XYZ employees do not have access to this information.
- Requiring all employees who have access to this information to sign a confidentiality agreement.

Disclosure of the throughputs of Equipment A, B, and C could cause substantial harm to XYZ by allowing competitors to better determine our costs. Both fixed and variable costs in our industry are highly dependent on the scale of operations. Disclosure of this information would give competitors information with which they could determine our production capacity, which we believe they do not know at this time. To the best of our knowledge, this information is not publicly available and is not reasonably obtainable by the public or other unauthorized parties.

Product Composition

XYZ protects the confidentiality of this information by:
- Keeping the information under lock and key except when designated employees have need of its use.
- Allowing only those employees who have a "need to know" access to this information. Other XYZ employees do not have access to this information.
- Requiring all employees who have access to this information to sign a confidentiality agreement.
- Requiring customers who have access to this information to sign confidentiality agreements

Disclosure of the composition of our final blended products could cause substantial harm to XYZ by allowing competitors to reverse engineer our products. XYZ has invested significant resources over many years developing these products. Disclosure of these compositions could allow competitors to copy our products without them being required to expend the resources we have spent developing them, thereby reducing our current competitive advantage. To the best of our knowledge, this information is not publicly available and is not reasonably obtainable by the public or other unauthorized parties.

Certification

I hereby certify under penalty of law that to the best of my knowledge and belief, after diligent inquiry, the information claimed above as confidential meets the confidential information criteria of 9 VAC 5-170-60 C and 40 CFR 2.208 and is not "emissions data." Further, to the best of my knowledge, this information has never been determined not to be confidential information by EPA or any other agency, nor has it ever been disclosed to the public by EPA or any other agency.

Typed Name and Title of Responsible Official _____

Signature of Responsible Official _____

Date _____

DEQ staff will review the material to determine its eligibility for confidential treatment and will inform you in writing of the determination.

IV. Toxic Pollutants

A. State Toxics and Hazardous Air Pollutants (HAPs)

Proposed projects that emit one or more state toxic air pollutants are evaluated under 9 VAC 5 Chapter 80, Article 5 of the Commonwealth of Virginia State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution (Regulation). The list of state toxics can be found on the following page. Unless exempt under 9 VAC 5-60-300 C., proposed projects with toxics emissions above the corresponding calculated hourly and/or annual exemption threshold levels must apply Best Available Control Technology (BACT) to minimize air toxic emissions. Since many of the air toxics are also either volatile organic compounds (VOC) or particulate matter compounds, control measures that reduce these criteria pollutant emissions may be used to reduce air toxic emissions. In addition, the applicant must demonstrate through air dispersion modeling that the concentration of the air toxic does not exceed the corresponding Significant Ambient Air Concentration (SAAC). The SAAC is the concentration of a toxic pollutant in the ambient air that, if exceeded, may have an adverse effect to human health.

Exemption and SAAC values for each air toxic can be found at the following link: Calculated exemption levels and SAACs for each Air Toxic Pollutant

Proposed projects with federal hazardous air pollutant emissions (HAPs) are evaluated for National Emission Standards for Hazardous Air Pollutant (NESHAP) (commonly referred to as maximum achievable control technology or MACT) applicability and to establish whether or not the proposed project will be a major or area source of HAPs. A major source of HAPs means any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit 10 tons per year or more of any individual HAP or 25 tons per year or more of any combination of HAPs. An area source is one that is not major.

New or modified projects that are a major source of HAPs and are not subject to a promulgated NESHAP are subject to permitting under 9 VAC 5 Chapter 80, Article 7 of the Regulation.

If a proposed project includes some units that are covered by a NESHAP and some that are not, the units not covered by the NESHAP need to be evaluated under the state toxics regulation.

For further details, please contact the DEQ regional office and/or check out the DEQ Air Toxics webpage.

B. List of Toxics and Federal Hazardous Air Pollutants (HAPs)

DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS AIR POLLUTANT LIST PAGE 1 OF 2

CAS#	NAME
75-07-0	ACETALDEHYDE
60-35-5	ACETAMIDE
75-05-8	ACETONITRILE
98-86-2	ACETOPHENONE
53-96-3	2-ACETYLAMINOFLUORENE
107-02-8	ACROLEIN
79-06-1	ACRYLAMIDE
79-10-7	ACRYLIC ACID
107-13-1	ACRYLONITRILE
107-05-1	ALLYL CHLORIDE
92-67-1	4-AMINODIPHENYL
62-53-3	ANILINE & HOMOLOGUES
90-04-0	o-ANISIDINE
----------	ANTIMONY COMPOUNDS[1]
----------	ARSENIC COMPOUNDS
71-43-2	BENZENE (including benzene from gasoline)
92-87-5	BENZIDINE
98-07-7	BENZOTRICHLORIDE
100-44-7	BENZYL CHLORIDE
----------	BERYLLIUM COMPOUNDS
92-52-4	BIPHENYL
72-55-9	2,2-BIS(p-CHLORPHENYL)-1,1-DICHLORO-ETHYLENE/DDE
75-25-2	BROMOFORM
106-99-0	1,3-BUTADIENE
111-76-2	BUTOXYETHANOL [3]
----------	CADMIUM COMPOUNDS
156-62-7	CALCIUM CYANAMIDE
133-06-2	CAPTAN
63-25-2	CARBARYL
75-15-0	CARBON DISULFIDE
56-23-5	CARBON TETRACHLORIDE
463-58-1	CARBONYL SULFIDE
120-80-9	CATECHOL
79-11-8	CHLOROACETIC ACID
133-90-4	CHLORAMBEN
57-74-9	CHLORDANE
7782-50-5	CHLORINE
126-99-8	ß-CHLOROPRENE / 2-CHLORO-1,3-BUTADIENE
532-27-4	2-CHLOROACETOPHENONE
108-90-7	CHLOROBENZENE
510-15-6	CHLOROBENZILATE
67-66-3	CHLOROFORM
107-30-2	CHLOROMETHYL METHYL ETHER / CMME
542-88-1	BIS-(CHLOROMETHYL) ETHER
----------	CHROMIUM COMPOUNDS
----------	COBALT COMPOUNDS
----------	COKE OVEN EMISSIONS
1319-77-3	CRESOLS / CRESYLIC ACID
95-48-7	o-CRESOL
108-39-4	m-CRESOL
106-44-5	P-CRESOL
98-82-8	CUMENE
----------	CYANIDE COMPOUNDS[2]
94-75-7	2,4-DICHLOROPHENOXYACETIC ACID (including salts and esters)
117-81-7	DI-SEC-OCTYL PHTHALATE / BIS(2-ETHYLHEXYL)PHTHALATE
334-88-3	DIAZOMETHANE
132-64-9	DIBENZOFURANS
96-12-8	1,2-DIBROMO-3-CHLOROPROPANE
84-74-2	DIBUTYL PHTHALATE
106-46-7	1-4 DICHLOROBENZENE
91-94-1	3,3'-DICHLOROBENZIDENE
75-34-3	1,1-DICHLOROETHANE / ETHYLIDENE DICHLORIDE
107-06-2	1,2-DICHLOROETHANE / ETHYLENE DICHLORIDE
111-44-4	DICHLOROETHYL ETHER / BIS(2-CHLOROETHYL)ETHER
542-75-6	1,3-DICHLOROPROPENE
62-73-7	DICHLORVOS
111-42-2	DIETHANOLAMINE
64-67-5	DIETHYL SULFATE
119-90-4	3,3-DIMETHOXYBENZIDINE
60-11-7	DIMETHYL AMINOAZOBENZENE / 4-DIMETHYLAMINOAZOBENZENE
79-44-7	DIMETHYL CARBAMOYL CHLORIDE
77-78-1	DIMETHYL SULFATE
121-69-7	DIMETHYLANILINE
119-93-7	3,3-DIMETHYLBENZIDINE
68-12-2	DIMETHYL FORMAMIDE / N,N-DIMETHYLFORMAMIDE
57-14-7	1,1-DIMETHYLHYDRAZINE
131-11-3	DIMETHYL PHTHALATE
534-52-1	4,6-DINITRO-o-CRESOL (including Salts)
51-28-5	2,4-DINITROPHENOL
121-14-2	2,4-DINITROTOLUENE
123-91-1	1,4-DIOXANE / 1,4-DIETHYLENEOXIDE
122-66-7	1,2-DIPHENYLHYDRAZINE
106-89-8	EPICHLOROHYDRIN
106-88-7	1,2-EPOXYBUTANE
110-80-5	2-ETHOXYETHANOL [3]
140-88-5	ETHYL ACRYLATE
100-41-4	ETHYL BENZENE
51-79-6	ETHYL CARBAMATE / URETHANE
75-00-3	ETHYL CHLORIDE / CHLOROETHANE
106-93-4	ETHYLENE DIBROMIDE / EDB / 1,2-DIBROMOETHANE
107-21-1	ETHYLENE GLYCOL
75-21-8	ETHYLENE OXIDE
96-45-7	ETHYLENE THIOUREA / ETU
151-56-4	ETHYLENIMINE
50-00-0	FORMALDEHYDE
----------	GLYCOL ETHERS[3]
76-44-8	HEPTACHLOR
118-74-1	HEXACHLOROBENZENE
87-68-3	HEXACHLOROBUTADIENE

The following pollutants and pollutant source categories are listed as HAPs under section 112(b) but are excluded from the definitions of toxics in the Virginia Regulations:

1. Asbestos NESHAP, 40 CFR 61 Subpart M (for asbestos removal, demolition and installation contact Virginia Department of Labor - 804/786-8009).
2. Fine Mineral Fibers.
3. Radionuclides (including radon).

DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS AIR POLLUTANT LIST PAGE 2 OF 2

CAS#	NAME
77-47-4	HEXACHLOROCYCLOPENTADIENE
67-72-1	HEXACHLOROETHANE
680-31-9	HEXAMETHYL PHOSPHORAMIDE / HMPA
822-06-0	HEXAMETHYLENE DIISOCYANATE
110-54-3	HEXANE
302-01-2	HYDRAZINE
7647-01-0	HYDROGEN CHLORIDE/ HYDROCHLORIC ACID (gas only)
7664-39-3	HYDROGEN FLUORIDE / HYDROFLUORIC ACID
123-31-9	HYDROQUINONE / DIHYDROXYBENZENE
78-59-1	ISOPHORONE
109-59-1	ISOPROPOXYETHANOL [3]
----------	LEAD COMPOUNDS
58-89-9	LINDANE (AND ALL OTHER STEREOISOMERS OF 1,2,3,4,5,6-HEXACHLOROCYCLOHEXANE)
108-31-6	MALEIC ANHYDRIDE
----------	MANGANESE COMPOUNDS
----------	MERCURY COMPOUNDS
67-56-1	METHANOL
72-43-5	METHOXYCHLOR
109-86-4	2-METHOXYETHANOL [3]
74-83-9	METHYL BROMIDE / BROMOMETHANE
74-87-3	METHYL CHLORIDE / CHLOROMETHANE
71-55-6	METHYL CHLOROFORM / 1,1,1-TRICHLOROETHANE
60-34-4	METHYL HYDRAZINE
74-88-4	METHYL IODIDE/IODOMETHANE
108-10-1	METHYL ISOBUTYL KETONE / HEXONE
624-83-9	METHYL ISOCYANATE
80-62-6	METHYL METHACRYLATE
1634-04-4	METHYL TERT BUTYL ETHER
101-14-4	4,4- METHYLENE BIS(2-CHLOROANILINE)
101-68-8	4,4'-METHYLENE DIPHENYL DIISOCYANATE / MDI
75-09-2	METHYLENE CHLORIDE / DICHLOROMETHANE
101-77-9	4,4-METHYLENE DIANILINE
91-20-3	NAPHTHALENE
----------	NICKEL COMPOUNDS
98-95-3	NITROBENZENE
92-93-3	4-NITRODIPHENYL
100-02-7	4-NITROPHENOL
79-46-9	2-NITROPROPANE
684-93-5	N-NITROSO-N-METHYLUREA / NMU
62-75-9	N-NITROSODIMETHYLAMINE / NDMA
59-89-2	N-NITROSOMORPHOLINE / NMOR
56-38-2	PARATHION
82-68-8	PENTACHLORONITROBENZENE / QUINTOBENZENE
87-86-5	PENTACHLOROPHENOL
108-95-2	PHENOL
106-50-3	P-PHENYLENEDIAMINE
75-44-5	PHOSGENE / CARBONYLCHLORIDE
7803-51-2	PHOSPHINE
7723-14-0	PHOSPHORUS
85-44-9	PHTHALIC ANHYDRIDE
1336-36-3	POLYCHLORINATED BIPHENYLS / AROCHLORS
----------	POLYCYCLIC ORGANIC MATTER / POM[4]
1120-71-4	1,3-PROPANE SULTONE
57-57-8	ß-PROPIOLACTONE
123-38-6	PROPIONALDEHYDE
114-26-1	PROPOXUR / BAYGON
78-87-5	PROPYLENE DICHLORIDE / 1,2-DICHLOROPROPANE
75-55-8	1,2-PROPYLENE IMINE
75-56-9	PROPYLENE OXIDE / 1,2-EPOXYPROPANE
91-22-5	QUINOLINE
106-51-4	QUINONE
----------	SELENIUM COMPOUNDS
100-42-5	STYRENE, MONOMER / VINYL BENZENE
96-09-3	STYRENE OXIDE
1746-01-6	2,3,7,8-TETRACHLORODIBENZO-p-DIOXIN
79-34-5	1,1,2,2-TETRACHLOROETHANE
127-18-4	TETRACHLOROETHYLENE / PERCHLOROETHYLENE
7550-45-0	TITANIUM TETRACHLORIDE
108-88-3	TOLUENE
95-80-7	2,4-TOLUENE DIAMINE / TOLUENE-2,4-DIAMINE
584-84-9	TOLUENE-2,4-DIISOCYANATE / TDI
95-53-4	O-TOLUIDINE
8001-35-2	TOXAPHENE / CHLORINATED CAMPHENE
120-82-1	1,2,4-TRICHLOROBENZENE
79-00-5	1,1,2-TRICHLOROETHANE
79-01-6	TRICHLOROETHYLENE
95-95-4	2,4,5-TRICHLOROPHENOL
88-06-2	2,4,6-TRICHLOROPHENOL
121-44-8	TRIETHYLAMINE
1582-09-8	TRIFLURALIN
540-84-1	2,2,4-TRIMETHYLPENTANE
108-05-4	VINYL ACETATE
593-60-2	VINYL BROMIDE
75-01-4	VINYL CHLORIDE / CHLOROETHYLENE
75-35-4	VINYLIDENE CHLORIDE / 1,1-DICHLOROETHYLENE
1330-20-7	XYLENE ISOMERS AND MIXTURES
95-47-6	O-XYLENE
108-38-3	M-XYLENE
106-42-3	P-XYLENE

[1]For all listing above which contain the word "compounds" and for glycol ethers, the following applies: Unless otherwise specified, these listings are defined as including any unique chemical substance that contains the named chemical as part of that chemical's infrastructure.

[2]X'CN where X=H' or any other group where a formal dissociation may occur. For example, KCN or $Ca(CN)_2$

[3]Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol $R-(OCH_2CH_2)_n-OR'$
where: n = 1, 2, or 3
R = alkyl C7 or less, or phenyl or alkyl substituted phenyl
R' = H, or alkyl C7 or less, or carboxylic acid ester, sulfate, phosphate, nitrate, or sulfonate

2-Ethoxyethanol, Isopropoxyethanol, and 2-Methoxyethanol meet this definition, but are considered as only one HAP (glycol ethers) for Title V and CAAA §112 purposes. They are also listed individually in this table as a reminder that because they have TLVs, they must be considered separately under Virginia's Toxic Pollutant regulations (9 VAC 5 Chapter 60, Articles 4 and 5).

[4]Includes substituted and/or unsubstituted polycyclic aromatic hydrocarbons and aromatic heterocycle compounds, with two or more fused rings, at least one of which is benzenoid in structure. Polycyclic Organic Matter is a mixture of organic compounds containing one or more of these polycyclic aromatic chemicals which include dioxins and furans. Polycyclic Organic Matter is generally formed or emitted during thermal processes including (1) incomplete combustion, (2) pyrolysis, (3) the volatilization, distillation or processing of fossil fuels or bitumens, or (4) the distillation or thermal processing of non-fossil fuels.

V. Local Governing Body Certification Form

Effective July 1, 1993, Section 10.1-1321.1 of the Code of Virginia specifies that:

"A. No application for a permit for a new or major modified stationary air pollution source shall be considered complete unless the applicant has provided the Director with notification from the governing body of the county, city, or town in which the source is to be located that the location and operation of the source are consistent with all ordinances adopted pursuant to Chapter 22 (15.2-2200 et seq.) of Title 15.2."

"B. The governing body shall inform in writing the applicant and the Department of the source's compliance or noncompliance not more than 45 days from receipt by the chief executive officer, or his agent, of a request from the applicant."

"C. Should the governing body fail to provide written notification as specified in subsection B of this section, the requirement for such notification as specified in subsection A of this section is waived."

Definitions:

- Any new site (not previously designated as a stationary source) upon which one or more emissions units undergo initial construction, installation, or relocation shall be considered a **New Source**.
- Any existing stationary source making changes to emission units (construction, installation, modification, reconstruction, or relocation) shall be considered a **Modified Source**. Modified sources need only use this form if the modification is major.
- Any stationary source that emits, or has the potential to emit, 100 tons or more per year of any regulated air pollutant shall be considered a "**Major Source**". "Regulated air pollutant" is defined in 9 VAC 5-80-1110 C.
- Any modified source, the modification of which is equivalent to the definition of a "major source", shall be considered a **Major Modified Source**.
- Any "major source", the modification of which results in a "significant" net emissions increase of any regulated pollutant, shall be considered a **Major Modified Source**.
- Emissions levels that are considered **Significant** for stationary sources located in Prevention of Significant Deterioration Areas are listed in the definition of "significant" in 9 VAC 5-80-1710 C. Emission levels that are considered "significant" for stationary sources located in Non-attainment Areas are listed in the definition of "significant" in 9 VAC 5-80-2010 C.

If required, the attached form should be submitted for all applications to the appropriate officials of the county, city, or town in which your facility is to be located. (The form is not required for Operating Permits insofar as these pertain to previously existing and operating sources.)

1. Applicant: Fill out the top section of the form and sign in the center block. Send the partially completed notification form to the local governing body by certified mail/return receipt, and keep a copy of the return receipt. A copy of the return receipt should then be submitted with the application to the appropriate DEQ regional office.

2. Local officials: You may use either this form or a certification designed by the locality. If you use this form, please fill out the bottom section of the form. The form asks you to certify that the facility is or will be consistent with all applicable local ordinances. Please check the appropriate box, sign the form and if there is inconsistency, please attach an explanation that indicates the corrective measures being taken. Then forward the form (or the certification designed by the locality) to the appropriate DEQ regional office within 45 days following receipt of the request from the applicant. (A postmark date within 45 days of receipt is sufficient.) Send a copy of the completed form to the applicant.

There are two ways for an applicant for a new or major modified stationary air pollution source permit to comply with this requirement. (1) When a completed form is received by DEQ indicating that locality certifies that the location and operation of the proposed source are in compliance with local ordinances, then this requirement is met. (2) If the locality fails to respond in writing to the request within 45 days of receipt, then this requirement is met when the applicant provides DEQ with evidence that the locality has received the form and has failed to respond in writing within the 45-day period.

VI. Application Fee Form

IMPORTANT NOTICE: UNLESS YOU ARE APPLYING FOR A NEW MAJOR SOURCE PERMIT OR A MAJOR MODIFICATION PERMIT, NO PERMIT APPLICATION FEE IS REQUIRED. Application fees are not required for applications for minor sources, minor modifications, or permit amendments.

This form must be completed and submitted with an appropriate permit application fee if the air permit application (Form 7) is for a proposed stationary source that meets ALL of the following:

1. The application is subject to new source review (NSR) permitting requirements under one or more of the four New Source Review permit programs described in Chapter 80 of the Regulations: Article 8 (PSD Major NSR), Article 9 (Nonattainment Major NSR), Article 7 (Hazardous Air Pollutant Major NSR) or Article 6 (New Source Review for State Major Stationary Sources).
   ☐ YES ☐ NO
2. The proposed stationary source is "new" in the sense that ALL of the proposed emissions units will be either constructed at the site, relocated to the site, or reactivated at the site.
   ☐ YES ☐ NO
3. The site of the proposed stationary source is "undeveloped" in the sense that there are no emissions units already legally constructed and/or operating at the site (i.e. the proposed stationary source will not become part of the same stationary source with a stationary source already there).
   ☐ YES ☐ NO
4. The proposed new stationary source will be classified as a "major stationary source" under one of the applicable NSR permit programs (listed in 1. above).
   ☐ YES ☐ NO

If the application meets ALL FOUR of the above requirements, then complete this Application Fee Form as follows and submit it with a check (or money order) for the appropriate permit fee to DEQ Receipts Control:

1. Provide the full name of the company and the mailing address to which the permit will be sent.
2. Provide the name and contact information for a company Representative that has a good working knowledge of the project and who will be able to answer questions concerning the application.
3. Provide the name of the proposed facility and its full street address. If no street address is available, then provide a description of the location of the proposed facility (such as directions on how to get there).
4. Check off each of the types of air permit NSR review that the application will be subject to. If you are unsure which regulation applies to your project, refer to the Virginia Regulations cited below. The air regulations are available on the VADEQ internet site: http://www.deq.virginia.gov/air/regulations/airregs.html. If you need assistance, contact the DEQ regional office that will be reviewing the application.
5. Add together all of the fee values under the checked NSR programs that are applicable and fill in the total under "Total Permit Application Fee". 9 VAC 5-80-2250 requires that projects falling under the jurisdiction of two or more Virginia NSR permit regulations will pay an application fee equaling the sum of the individual fees, up to but not exceeding $30,000.^{00}.
6. Indicate which VADEQ Regional Office will be reviewing the air quality permit application.
7. Mail the completed form and a check (or money order) for the amount of the air permit application fee (made payable to "Treasurer of Virginia") to the **Department of Environmental Quality, Receipts Control, P.O. Box 10150, Richmond, VA 23240**.

A copy of the form and a copy of the check (or money order) should also accompany the permit application sent to the appropriate DEQ regional office. Keep a copy for your records. Direct any questions regarding this form or payment of the permit application fees to the DEQ regional office to which you are submitting your application.

Applicable NSR permit program:	**VA Administrative Code:**
Major Stationary Sources Locating in PSD Areas (Ch. 80, Article 8)	9 VAC 5-80-1605 through 1995
Major Stationary Sources Locating in Non-attainment Areas (Ch. 80, Article 9)	9 VAC 5-80-2000 through 2240
New …Major Sources of Hazardous Air Pollutants (Ch. 80, Article 7)	9 VAC 5-80-1400 through 1590
New …State Major Stationary Sources (Ch. 80, Article 6)	9 VAC 5-80-1100 through 1320

VII. Document Certification Form

Various provisions of the Regulations for the Control and Abatement of Air Pollution require that certain documents submitted to the Board or the Department be signed by a responsible official with certification that the information contained in the statement is accurate to the best knowledge of the individual certifying the statement. Documents covered by this requirement include, but are not limited to, permit applications, registrations, emission statements, emission testing and monitoring reports, or compliance certifications. The certification should include the full name, title, signature, date of signature, and telephone number of the responsible official. A responsible official is defined as follows (Regulations, 9 VAC 5-20-230 A.):

a. For a business entity, such as a corporation, association or cooperative, a responsible official is either:

    1. The president, secretary, treasurer, or a vice-president of the business entity in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the business entity; or

    2. A duly authorized representative of such business entity if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), or (ii) the authority to sign documents has been assigned or delegated to such representative in accordance with procedures of the business entity.

b. For a partnership or sole proprietorship, a responsible official is a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency, a responsible official is either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency.

Certification is required with each application submittal, including amendments to an application (i.e. new pages, revisions to existing pages and other amendments to application information).

Reference: Regulations, 9 VAC 5-80-1140 D. Letters, phone calls, etc. are considered additional supplementary information to the certified application submittal.

VIII. Pages 6 and 7 - General Information

PERSON COMPLETING FORM AND DATE – Provide the name of the person that completed the form, along with the date completed.

REGISTRATION NUMBER - Give the registration number assigned to the facility if applicable.

COMPANY AND DIVISION NAME - List the official company name and the division if applicable.

MAILING ADDRESS - List the mailing address that corresponds to the facility on this application.

EXACT SOURCE LOCATION - Provide a description of the facility location indicating street address (911 address if available) or directions to facility; provide a map pinpointing the exact source location and specify where the plant property boundaries are, if requested by the regional office; provide a plant layout with dimensions of all buildings (height, length, width) at the facility indicating all stack and emission point locations by stack or reference number, if requested.

TELEPHONE NUMBER - List the phone number at the facility.

NUMBER OF EMPLOYEES AT SITE - List the number of employees at the facility.

PROPERTY AREA AT SITE - List the area in acres.

PERSON TO CONTACT ON AIR POLLUTION MATTERS - Provide the name/title of a contact person for air pollution matters.

PHONE NUMBER - Provide a phone number at which DEQ staff can reach the contact person.

FAX PHONE NUMBER - Provide the fax number of the contact person, if there is one.

E-MAIL ADDRESS - Provide an E-mail address of the contact person, if you wish to communicate with DEQ by e-mail.

LAT/LONG COORDINATES OR UTM COORDINATES OF FACILITY – Provide the latitude and longitude coordinates or UTM Coordinates of the facility.

REASON FOR SUBMISSION - Check the appropriate box(es) and the applicable regulation(s).

1. "STATE OPERATING PERMIT" means that you are either an existing source applying for an operating permit, or are a NEW SOURCE applying for a State Operating Permit concurrently with a permit to construct and operate the NEW SOURCE. State Operating Permits are normally optional, and are requested for one of the reasons stated in 9 VAC 5-80-800 C.
2. "NEW SOURCE" means that you are either constructing emission units at a new facility where no facility now exists, or you are constructing emission units at a facility that previously had no emission units at the facility. The NEW SOURCE is (or may be) subject to permit review requirements.
3. "MODIFICATION of a SOURCE" means that (1) you already have emission units at your facility, (2) you are making physical or operational changes to the facility, (3) those proposed changes could result in a net emission increase of a regulated pollutant (or the emission of a regulated pollutant not presently being emitted), and (4) that physical or operational change is (or may be) subject to permit review requirements.
4. “RELOCATION of a SOURCE” means that you are relocating emission units from a facility in one location to a new or existing facility in another location and that relocation is (or may be) subject to permit review.
5. “PERMIT AMENDMENT” means that you have an effective air permit for your source, and you need changes made to that permit that do not qualify as a “MODIFICATION of a SOURCE”.
6. "Applicability Determination for an EXEMPTION" means that you are applying for written confirmation that a particular change is not subject to permit review under 9 VAC 5, Chapter 80, Articles 6, 8, or 9.

7. "OTHER (SPECIFY)" means you intend to make a change to your facility, you do not know what air permitting requirements apply, and you wish for DEQ to evaluate the change for you and determine which requirements apply. Fill out the Form 7 as completely as possible and describe in a letter what you wish to do.

The listed regulations detail the various types of air pollution permits. Please indicate which of these you believe are applicable to this application. (More than one may apply). Sections of the regulations may be downloaded from the DEQ web site at http://www.deq.virginia.gov. Copies of the regulations are available for purchase from the WestGroup by calling 1-800-328-4880 (Air regulations are contained in Volume 6, Title 9 of the Virginia Administrative Code).

EXPLANATION OF PERMIT REQUEST – Provide a brief narrative explanation or description of the permit request, including but not limited to, new units being added/modified, change in throughputs, changes to permit conditions, what type of facility it is, etc.

IS THE FACILITY DESIGNED TO BE PORTABLE? - 9 VAC 5-80-1110 B defines "portable", to mean an emissions unit that is designed to have the capability of being moved from one location to another for the purpose of operating at multiple locations and storage when idle. Indications of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. If this facility is already permitted as a portable facility, list the date of the effective permit.

IS THIS AN APPLICATION TO BE PERMITTED AS A PORTABLE PLANT? - If the facility is designed to be portable, indicate whether or not you wish to have the permit contain specific conditions that will acknowledge this fact, so that the facility may be relocated without a new permit in accordance with 9 VAC 5-80-1320 A.1.c.

IS THIS A NOTIFICATION OF RELOCATION OF A PORTABLE FACILITY? - 9 VAC 5-80-1320 A.1.c allows the relocation of a properly permitted portable facility to be exempt from permitting requirements, as long as it meets certain requirements, one of which is timely notification of the relocation. This notification should be sent to the Director of the DEQ Regional Office into whose area of responsibility the facility will be relocated. The 15-day notification period begins when DEQ receives the notification. Submission of pages 5 - 7 of this Form 7 may be used for that notification (with “RELOCATION of a SOURCE” marked on Page 6). However, use of this form for that purpose is not required. Note that a site map and documentation of site suitability should accompany this form or whatever means of notification is used. Include the registration number of any stationary source that will be co-located with the portable facility at the new site.

Site suitability may be documented by the use of a properly certified Local Governing Body Certification Form from the locality to which the facility will be relocated, although that form is not required for this purpose. Contact the appropriate DEQ Regional Office for instructions. DEQ will make a determination of site suitability based upon regional and local requirements.

PRODUCTS MANUFACTURED/SERVICED - Indicate the type of business in which this facility is engaged, listing products produced and/or services performed.

SIC CODE(S) - Provide all 4-digit Standard Industrial Classification Code(s) for this facility and for the process(es). Place primary SIC in the first set of blocks.
Reference website: http://www.osha.gov/pls/imis/sicsearch.html

NAICS CODE(S) - Provide all 6-digit North American Industry Classification System Code(s) for this facility and for the process(es). Place primary NAICS in the first set of blocks.
Reference website: http://www.census.gov/epcd/naics07/

FACILITIES UNDER COMMON OWNERSHIP - List the facilities in Virginia that are owned by the applicant company, its subsidiaries, and its parent company. Include air permit registration number of facility if known.

MILESTONE DATES - List all dates pertinent to this application as accurately as possible. For start-up dates, provide each relevant date as it might affect emissions, e.g., start-up of each unit, modification of each unit, imposition of or changes in permitted emissions for each unit.

IX. Page 8 – Fuel Burning Equipment

UNIT REF. NO. - Assign a unique reference number for each piece of fuel burning equipment. If the facility has other equipment already registered, do not repeat those reference numbers. **NOTE:** Where a unit burns more than one fuel, assign a separate line for each, pegged to the unit (i.e., #1A for oil, #1B for the same unit burning coal, etc.).

EQUIPMENT MANUFACTURER, TYPE AND MODEL NO. - Provide the nameplate information for each piece of equipment.

DATE OF MANUF. - Give the date that each emission unit was (or will be) manufactured.

DATE OF CONST. – Give the date that each emission unit was (or will be) constructed in place.

MAXIMUM RATED INPUT HEAT CAPACITY FOR EACH FUEL - Provide the manufacturer's maximum rated heat input in units of Million Btus per hour based on the nameplate rating or maximum fuel usage.

TYPE OF FUEL – Identify all the types of fuel that will be burned by each referenced piece of equipment and the corresponding data for each fuel type. If used in a process, relate this to the appropriate process.

TYPE OF EQUIPMENT - Use Code A at the bottom of the page.

USAGE - Use Code B at the bottom of the page.

REQUESTED THROUGHPUT – Provide the requested throughput of the emission unit in units of hours of operation per year OR fuel per year (i.e. gallons per year, cubic feet per year, etc.) Specify which option is chosen and only one option can be chosen. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

FEDERAL REGULATIONS THAT APPLY – List all the federal regulations (New Source Performance Standards (NSPS) in 40 CFR Part 60, Maximum Achievable Control Technologies (MACT) in 40 CFR Part 63, etc.) that apply to the emission unit.

X. Page 9 – Stationary Internal Combustion Engines

UNIT REF. NO. - Assign a unique reference number for each stationary internal combustion engine. If the facility has other equipment already registered, do not repeat those reference numbers. **NOTE:** Where a unit burns more than one fuel, assign a separate line for each, pegged to the unit (i.e., #1A for oil, #1B for the same unit burning bio-diesel, etc.).

EQUIPMENT MANUFACTURER, TYPE AND MODEL NO. - Provide the nameplate information for each piece of equipment.

DATE OF MANUF. - Give the date that each emission unit was (or will be) manufactured.

DATE OF CONST. – Give the date that each emission unit was (or will be) constructed in place.

OUTPUT BRAKE HORSEPOWER - Provide the manufacturer's maximum rated output capacity in units of brake horsepower (also known as mechanical horsepower).

OUTPUT ELECTRICAL POWER - Provide the manufacturer's maximum rated output electrical power in units of kilowatts.

TYPE OF FUEL – Identify all the types of fuel that will be burned by each referenced piece of equipment and the corresponding data for each fuel type. If used in a process, relate this to the appropriate process.

USAGE - Use Code C at the bottom of the page.

REQUESTED THROUGHPUT – Provide the requested throughput of the emission unit in units of hours of operation per year OR fuel per year (i.e. gallons per year, cubic feet per year, etc.) Specify which option is chosen and only one option can be chosen. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

FEDERAL REGULATIONS THAT APPLY – List all the federal regulations (New Source Performance Standards (NSPS) in 40 CFR Part 60, Maximum Achievable Control Technologies (MACT) in 40 CFR Part 63, etc.) that apply to the emission unit.

XI. Page 10 – Liquid and/or Solid Waste Incinerators

UNIT REF. NO. - Assign a unique reference number for each incinerator. If the facility has other equipment already registered, do not repeat those reference numbers. **NOTE:** Where a unit incinerates more than one waste type, assign a separate line for each, pegged to the unit.

EQUIPMENT MANUFACTURER, TYPE AND MODEL NO. - Provide the emission unit manufacturer and model number. Include a diagram of the unit and specify any special features. If the unit is used for energy recovery, provide this information on the Fuel Burning Equipment page.

DATE OF MANUF. - Give the date that each emission unit was (or will be) manufactured.

DATE OF CONST. – Give the date that each emission unit was (or will be) constructed in place.

INCINERATOR MAXIMUM RATED CAPACITY – Provide the maximum design input capacity in units of pounds per hour of waste type disposed of in this emission unit.

BURNER RATED CAPACITY – Provide the maximum rated heat input of the primary and secondary chamber burners in units of Btus per hour.

MINIMUM CHAMBER TEMPERATURE - Indicate the minimum temperatures which the burners in the primary and secondary chambers are designed to maintain while incinerating waste in units of degrees Fahrenheit.

REQUESTED THROUGHPUT TO BE INCINERATED – Provide the requested throughput amount of waste material expected to be incinerated in a 1-hour period and on an annual basis. For an air permit limit on this incinerator, this amount would be a reasonable and comfortable limit, taking future growth into account. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

INCINERATOR TYPE - Use Code D at the bottom of the page.

WASTE TYPE – Use Code E at the bottom of the page.

MINIMUM SECONDARY CHAMBER RETENTION TIME – Provide the minimum flue gas retention time in the secondary chamber at the specified minimum temperature in units of seconds.

BURN DOWN CYCLE TIME – Provide the minimum burn-down time recommended by the manufacturer or the time required to consume all combustible material, whichever is greater, in units of hours.

FEDERAL REGULATIONS THAT APPLY – List all the federal regulations (New Source Performance Standards (NSPS) in 40 CFR Part 60, Maximum Achievable Control Technologies (MACT) in 40 CFR Part 63, etc.) that apply to the emission unit.

XII. Page 11 – Processing, Manufacturing, Surface Coating, and Degreasing Operations

UNIT REF. NO. - Assign a unique reference number for each piece of equipment. If the facility has other equipment already registered, do not repeat those reference numbers.

PROCESS OR OPERATION NAME - Label each emission unit with the applicable process or operation, starting with the initial step in the manufacturing process, followed by succeeding logical manufacturing steps until the process is complete.

EQUIPMENT MANUFACTURER, TYPE AND MODEL NO. - Provide the nameplate information for each piece of equipment.

DATE OF MANUF. - Give the date that each emission unit was (or will be) manufactured.

DATE OF CONST. – Give the date that each emission unit was (or will be) constructed in place.

MAXIMUM RATED CAPACITY – Provide the maximum rated input capacity of the process or operation in units of measure per hour.

REQUESTED THROUGHPUT - Provide the requested throughput of feed material expected to be processed (hourly, daily, and yearly) and/or output as needed. Specify units. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

FEDERAL REGULATIONS THAT APPLY – List all the federal regulations (New Source Performance Standards (NSPS) in 40 CFR Part 60, Maximum Achievable Control Technologies (MACT) in 40 CFR Part 63, etc.) that apply to the emission unit.

XIII. Page 12 – Inks, Coatings, Stains, and Adhesives

This page is intended to address volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) resulting from application of inks, coatings, or stains. Each page may describe these pollutants from a single emissions unit.

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

COATING MATERIAL - List typical coatings and a design, worst case coating type, i.e., topcoat having the highest percentage of VOCs and highest of each toxic component content as applied to the substrate.
NOTE: Where the term "coating" is used in these instructions, the instructions may also refer to inks, stains, or adhesives.

COATING USE - Choose the coating usage type from the Code F list at the bottom of the page, and list the letter or letter and number combination that describes the coating use. Use more than one if that individual coating formulation has multiple uses. If "Other Coating" is selected, describe.

LBS. VOC IN COATING AS APPLIED - List the VOC content of the coating as it is applied to the substrate including any added solvent, in units of (1) Pounds (lbs.) VOC per gallon of coating, (2) lbs. VOC per gallon coating, minus water and exempt solvents (compounds that are exempted from the definition of VOCs as defined in 9 VAC 5-10-20), and (3) lbs. VOC per gallon coating solids. The above information should be calculated based on coating and solvent Environmental Data Sheets, Material Safety Data Sheets (MSDS), or Certified Product Data Sheets (CPDS) available from the coating supplier or manufacturer. Show calculations, if appropriate. If you have questions, please contact the Regional Office.

VOC CONTROL METHOD - Choose the appropriate letter and/or number code from the Code G list. If "Other" is selected, please describe it.

SOLIDS TRANSFER EFFICIENCY - List the transfer efficiency as the ratio of the amount of coating solids

deposited on the product to the amount of solids in the coating as applied.

COATING DENSITY - List the density of the coating as applied to the substrate in units of pounds per gallon (lbs/gal). Show calculations if coating is thinned or reduced.

MAXIMUM COATING USAGE AS APPLIED - List the maximum expected usage of the individual coating or coating type in terms of gallons per hour and gallons per year.

HAZARDOUS AIR POLLUTANTS (HAPS) - List the individual HAP components of the coating on the lines. For each hazardous air pollutant, give the name and Chemical Abstract Services (CAS) Number.

LBS. OF HAP PER GALLON OF COATING AS APPLIED - For each HAP component, list the pounds (lbs.) of HAPs per gallon of coating as applied to the substrate. Attach sample calculations, including any emission factors used, and MSDS or CPDS sheets, if appropriate.

XIV. Pages 13 and 14 – VOC/Petroleum Liquid Storage Tanks

To estimate air emissions from tanks, please download the TANKS Emissions Estimation Program Software. For questions on the TANKS Software: TANKS Software Frequent Questions

Page 13:

UNIT REF. NO. - Assign a unique reference number for each piece of equipment. If the facility has other equipment already registered, do not repeat those reference numbers.

TANK TYPE - Use Code H at the bottom of the page.

SOURCE OF TANK CONTENTS – Use Code I at the bottom of the page.

DATE OF MANUF. - Give the date that each emission unit was (or will be) manufactured.

DATE OF CONST. – Give the date that each emission unit was (or will be) constructed in place.

MATERIAL STORED - List all possible contents for each tank for mixtures; include maximum percent by weight of each component on a separate line.

MAXIMUM TRUE VAPOR PRESSURE - Include the maximum true vapor pressure of each component at storage conditions in terms of absolute pressure for mixtures (see definition of True Vapor Pressure in 9 VAC 5-10-20).

DENSITY - List the density of the stored material. For mixtures, give the density of each component.

MAXIMUM AVERAGE STORAGE TEMPERATURE - List the maximum average temperature at which the material is stored in units of Fahrenheit.

TANK DIAMETER – List the tank diameter in units of feet.

TANK CAPACITY - List the tank capacity in units of gallons.

REQUESTED THROUGHPUT - Provide the requested throughput of the emission unit in units of gallons per year. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

FEDERAL REGULATIONS THAT APPLY – List all the federal regulations (New Source Performance Standards (NSPS) in 40 CFR Part 60, Maximum Achievable Control Technologies (MACT) in 40 CFR Part 63, etc.) that apply to the emission unit.

Page 14:

TANK COLOR - SHELL/ROOF - List the color(s) of shell and roof of the tank.

For Fixed Roof Tanks:

INTERNAL TANK HEIGHT OR LENGTH - For a vertical tank, list the height in units of feet. For a horizontal tank, list the length in units of feet.

MAXIMUM HOURLY FILLING - Maximum gallons that could be pumped into the tank in one hour, starting with an empty tank.

TYPE OF ROOF – For external fixed roof tanks, list the type of roof (cone or dome).

CONE HEIGHT AND SLOPE – For external fixed roof tanks with a cone roof, list the height in units of feet and the slope in units of feet per feet.

DOME HEIGHT AND RADIUS – For external fixed roof tanks with a dome roof, list the height in units of feet and the radius in units of feet.

For Floating Roof Tanks:

SEAL TYPE - Use Code J at the bottom of the page.

MAXIMUM HOURLY WITHDRAWAL - Maximum gallons that could be withdrawn from the tank in one hour, starting with a full tank.

SELF SUPPORTING – For internal floating roof tanks, list is the tank if self supporting (yes or no).

NO. OF COLUMNS – For internal floating roof tanks, if the tank is NOT self supporting, list the number of columns.

COLUMN DIAMETER – For internal floating roof tanks, if the tank is NOT self supporting, list the column diameter in units of feet.

****Note:** If the TANKS program is used for emission calculations, please note that the TANKS program has not been updated with roof landing losses calculations for internal floating roof tanks. However, it is possible to estimate roof landing losses in TANKS by using a portion of the guidance developed for degassing and cleaning a tank by modeling the vapor space under the roof as a fixed roof tank and calculating the emissions from one turnover. This is less accurate than using Section 7.1.3.2.2 of AP-42.

XV. Page 15 – Loading Racks and Oil-Water Separators

UNIT REF. NO. - Assign a unique reference number for each piece of equipment. If the facility has other equipment already registered, do not repeat those reference numbers.

NAME OF PRODUCT LOADED OR RECOVERED - For loading racks, list all possible materials loaded for each rack. For oil-water separators, list all possible materials recovered.

MAXIMUM HOURLY THROUGHPUT – Provide the expected maximum gallons to be loaded from the rack or entering the oil-water separator in one hour.

REQUESTED ANNUAL THROUGHPUT – Provide the requested annual throughput in units of gallons to be loaded from the rack or entering the oil-water separator in one year. This amount would be a reasonable and comfortable limit considering future growth. These numbers may be used to establish air permit limits and should be consistent with calculated emissions.

FEDERAL REGULATIONS THAT APPLY – List all the federal regulations (New Source Performance Standards (NSPS) in 40 CFR Part 60, Maximum Achievable Control Technologies (MACT) in 40 CFR Part 63, etc.) that apply to the emission unit.

For Loading Racks Only:

TYPE OF LOADING - Use Code K at the bottom of the page.

HATCH VAPOR CLOSURE ON LOADING ARMS - Use Code L at the bottom of the page.

For Oil-Water Separators Only:

TYPE OF ENCLOSURE - Use Code M at the bottom of the page.

XVI. Page 16 – Fumigation Operations

UNIT REF. NO. - Assign a unique reference number for each piece of equipment. If the facility has other equipment already registered, do not repeat those reference numbers.

OBJECT OR PRODUCT TO BE FUMIGATED - Provide each type of product or object to be fumigated. For example: lumber, tobacco, silo, pallets, mattresses, etc. If the facility will be fumigating many different types of commodities, then the commodities may be grouped. For example: food products, wood products, etc.

CONTAINMENT SYSTEM – Provide the type of containment system to be used during fumigation. For example: Sealed silo, Sealed Containers, Tarp, Sealed warehouse, etc.

FUMIGANT – Provide type of fumigant to be used. For example: methyl bromide or phosphine

MAXIMUM DAILY FUMIGANT USAGE – Provide the maximum expected amount of fumigant to be used in one calendar day. If multiple fumigations will occur during the same day, these should be added together to obtain the daily usage. If more than one type of fumigant is to be used, maximum daily amounts should be provided for each fumigant. Units should be provided in pounds (methyl bromide) or grams (phosphine) per day.

MAXIMUM ANNUAL FUMIGANT USAGE – Provide the maximum annual amount of fumigant to be used in a year. If more than one type of fumigant is to be used, maximum annual amounts should be provided for each fumigant. Units should be provided in pounds or tons (methyl bromide) or grams (phosphine) per year.

ESTIMATED NUMBER OF FUMIGANT EVENTS PER YEAR – Multiple units fumigated at the same time in the same area can be considered one fumigation event.

AERATION METHOD – Indicate whether aeration will occur naturally or using fans or other mechanical methods.

DISTANCE FROM FUMIGATION OPERATION TO PROPERTY OR FENCELINE – Provide the distance from the fumigation operation to the property or fence line. If the property is not fenced, please note this on the form.

XVII. Page 17 – Air Pollution Control and Monitoring Equipment

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

VENT/STACK NO. - Assign a unique vent/stack number for each vent or stack through which the process or equipment identified by this reference number exhausts.

DEVICE REF. NO. - Assign a unique pollution control device reference number(s).

POLLUTANT/PARAMETER – List all the pollutants emitted from this process/equipment that are controlled and/or monitored. List all surrogate parameters of the process/equipment that are monitored (e.g. - opacity, CO_2, etc.).

Air Pollution Control Equipment:

MANUFACTURER AND MODEL - List the manufacturer and model of the control equipment associated with the pollutant listed in the preceding column.

TYPE - Use Code N at the bottom of the page.

PERCENT EFFICIENCY - List the percent control efficiency for the control equipment and associated pollutant.

Monitoring Instrumentation:

SPECIFY TYPE, MEASURED POLLUTANT, AND RECORDER USED – Please list:

- Type: The manufacturer and model number of the stack gas monitor used to measure emissions of the measured pollutant. List opacity monitors in association with particulate/PM-10/PM 2.5 emissions.
- Measured Pollutant: The pollutant that is measured by the monitoring equipment.
- Recorder Used: The type of recorder associated with the monitor (i.e. strip chart, data logger, etc.).

XVIII. Page 18 – Air Pollution Control Equipment – Supplemental Information

DEVICE REF. NO. - Continue assigned reference number(s) from previous page(s).

TYPE - Use Code N at the bottom of the page.

NOTE: For the remaining spaces, the applicable control device type numbers (see Code N) for which this information is required are listed in parentheses on the form.

LIQUID FLOW RATE - List in units of gallons per minute.

LIQUID MEDIUM - Specify the type of liquid used in the control equipment, and the pH. For condensers, specify inlet temperatures of condensing medium (water, glycol, etc.) and inlet temperature of gas stream.

CLEANING METHOD - Specify the method of cleaning the control equipment (e.g., a baghouse, No. 9a).

NUMBER OF SECTIONS/FIELDS - List the number of fields or chambers for ESPs (No. 10), or number of chambers for baghouses (No. 9).

AIR-TO-CLOTH RATIO - List in units of feet per minute or as specified by manufacturer (cubic feet per minute gas flow to square feet of cloth).

FILTER MATERIAL - List the type of material used for the baghouse filters.

INLET TEMP. - List the temperature at the inlet of the control equipment in units of degrees Fahrenheit.

REGENERATION METHOD & CYCLE TIME - List the regeneration method (steam stripping, hot air, etc.) and cycle time in units of seconds for adsorbers (No. 18). If regeneration is done offsite, please state so.

CHAMBER TEMP. - List the combustion temperature of afterburner chamber in units of degrees Fahrenheit.

RETENTION TIME - List the retention time for the control equipment in units of seconds.

PRESSURE DROP - List the pressure drop across the control equipment in units of inches of water.

XIX. Page 19 – Stack Parameters and Fuel Data

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

VENT/STACK NO. - Assign a unique vent/stack number for each vent or stack through which the process or equipment identified by this reference number exhausts.

VENT/STACK CONFIGURATION - Use Code O at the bottom of the page.

VENT/STACK HEIGHT - List the exit height from the ground level in units of feet.

EXIT DIAMETER - List the inside diameter of the vent/stack at its exit in units of feet. For rectangular vents, provide length and width of the vent/stack at its exit in units of feet.

EXIT GAS VELOCITY - List the velocity in units of feet per second of the stack gas as it exits the vent/stack.

EXIT GAS FLOW RATE - List the volume of the flow in units of actual cubic feet per minute.

EXIT GAS TEMPERATURE – List the exit gas temperature in units of degrees Fahrenheit.

TYPE OF FUEL - Identify all the types of fuel that will be burned by each referenced piece of equipment and the corresponding data for each fuel type.

HIGHER HEATING VALUE - Provide the higher heating value of the specified fuel in units of Btus per unit of fuel.

MAXIMUM RATED BURNED/HR - Provide the maximum rated fuel input at maximum design capacity in units such as pounds, gallons, or cubic feet per hour.

MAXIMUM PERCENT SULFUR - Identify the highest percent sulfur content for the fuel.

MAXIMUM PERCENT ASH - Identify the highest percent ash content for the fuel.

XX. Page 20 – Proposed Permit Limits for Criteria Pollutants

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

PROPOSED PERMIT LIMITS FOR CRITERIA POLLUTANTS - List the emission rates to the atmosphere for the pollutants indicated in pounds per hour and tons per year. Provide detailed calculations including assumed control efficiency of control equipment (if applicable) and using the proposed limits on material, throughput and/or hours of operation per year.

CRITERIA POLLUTANTS are defined as follows:

- Particulate Matter (PM) – Any airborne finely divided solid material with an aerodynamic diameter smaller than 100 micrometers.
- Particulate (PM-10) - Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (includes filterable and condensable).
- Particulate (PM 2.5) - Particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (includes filterable and condensable).

- Sulfur Oxides (SO_X) - Measured as sulfur dioxide (SO_2).
- Nitrogen Oxides (NO_X) - All oxides of nitrogen except nitrous oxide.
- Carbon Monoxide (CO) - Colorless, odorless, tasteless gas.
- Lead (Pb) – Metal.
- Volatile Organic Compounds (VOCs) - (See definition in 9 VAC 5-10-20). Do not include perchloroethylene as a VOC, but list it as a hazardous air pollutant (HAP) on page 21 of the Form 7 Application. The following common compounds are currently exempt from the definition of VOC (however, items 4 and 5 below are still to be reported as toxic pollutants page 21):

  1. Acetone
  2. Methane
  3. Ethane
  4. 1,1,1-trichloroethane (methyl chloroform)
  5. Methylene chloride
  6. Trichlorofluoromethane (CFC-11)
  7. Dichlorodifluoromethane (CFC-12)
  8. Chlorodifluoromethane (HCFC-22)
  9. Trifluoromethane (HFC-23)
  10. 1,1,2-trichlorotrifluoroethane (CFC-113)
  11. 1,2-dichlorotetrafluoroethane (CFC-114)
  12. Chloropentafluoroethane (CFC-115)
  13. Dichlorotrifluoroethane (HCFC-123)
  14. Tetrafluoroethane (HFC-134a)
  15. Dichlorofluoroethane (HCFC-141b)
  16. Chlorodifluoroethane (HCFC-142b)

XXI. Page 21 – Proposed Permit Limits for Toxic Pollutants/HAPs

Complete this page for any new emissions or increased emissions of toxic pollutants or HAPs resulting from the Proposed Facility (from a new plant, or from any new, modified, reconstructed, or debottlenecked processes or equipment at an existing plant. It is not necessary to list each toxic or HAP emitted from the source unless so directed by the DEQ Regional Office. Then, for each toxic pollutant listed, which is not exempt by 9 VAC 5-60-300 C.3, 4 or 5, or D, E, or F or 9 VAC 5-80-1320 F of the Regulations, list the total source-wide emissions of that pollutant. Compliance is based on total toxic emissions from the source.

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

PROPOSED PERMIT LIMITS FOR TOXIC POLLUTANTS/HAPS - List the emission rates to the atmosphere for the pollutants indicated in pounds per hour and tons per year. Provide detailed calculations including assumed control efficiency of control equipment (if applicable) and using the proposed limits on material, throughput and/or hours of operation per year.

CAS NO. - List the Chemical Abstract Services (CAS) number for each listed pollutant.

XXII. Page 22 – Proposed Permit Limits for Other Regulated Pollutants

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

PROPOSED PERMIT LIMITS FOR OTHER REGULATED POLLUTANTS - List the emission rates to the

atmosphere for all pollutants listed in the definition of "regulated pollutants" in Article 6 (9 VAC 5-80-1110 C) of the Regulations except for the Criteria Pollutants (PM, PM-10, PM 2.5, SO_2, NO_X, CO, VOC and Pb) and the toxic/HAP pollutants listed on the toxic/HAP pollutant listing in the front of this Instructions document. These pollutants include: Fluorides, Sulfuric Acid Mist, Hydrogen Sulfide (H_2S), Total Reduced Sulfur (including H_2S), Reduced Sulfur Compounds (including H_2S), Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans), Municipal Waste Combustor Metals (measured as particulate matter), Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl), and Municipal Solid Waste Landfill Emissions (measured as nonmethane organic compounds). Provide detailed calculations of the emission rates, using (for the proposed controlled emission rates) the proposed control efficiency of control equipment, and using the proposed limits on material, throughput and/or hours of operation per year.

XXIII. Page 23 – Proposed Permit Limits for Greenhouse Gases (GHGs) on Mass Basis

IMPORTANT NOTICE: THIS PAGE IS FOR PSD MAJOR SOURCES ONLY!

Please see 9 VAC 5 Chapter 85 for more information on Greenhouse Gases.

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

PROPOSED PERMIT LIMITS FOR GHGs POLLUTANTS ON MASS BASIS - List the proposed permit emission limits for the GHGs pollutants in pounds per hour and tons per year. Provide detailed calculations including assumed control efficiency of control equipment (if applicable) and using the proposed limits on material, throughput and/or hours of operation per year.

XXIV. Page 24 – Proposed Permit Limits for Greenhouse Gases (GHGs) on CO_2 Equivalent Emissions (CO_2e) Basis

IMPORTANT NOTICE: THIS PAGE IS FOR PSD MAJOR SOURCES ONLY!

Please see 9 VAC 5 Chapter 85 for more information on Greenhouse Gases.

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

PROPOSED PERMIT LIMITS FOR GHGs POLLUTANTS ON CO_2 EQUIVALENT BASIS - List the proposed permit emission limits for the GHGs pollutants on a CO_2e basis in pounds per hour and tons per year. Provide detailed calculations including assumed control efficiency of control equipment (if applicable) and using the proposed limits on material, throughput and/or hours of operation per year.

****Note:** The information on converting mass based emissions to CO_2e based emissions is provided in the instructions for *Page 26 - Baseline Actual Emissions (BAE) For Greenhouse Gases (GHGs) Pollutant Emissions on CO_2 Equivalent Emissions (CO_2e) Basis*.

XXV. Page 25 – Baseline Actual Emissions (BAE) for Criteria Pollutants

IMPORTANT NOTICE: THIS PAGE IS FOR PSD OR MAJOR NONATTAINMENT SOURCES ONLY!

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

CRITERIA POLLUTANTS are defined as follows:

- Particulate Matter (PM) – Any airborne finely divided solid material with an aerodynamic diameter smaller than 100 micrometers.
- Particulate (PM-10) - Particulate matter with an aerodynamic diameter less than or equal to 10 micrometers (includes filterable and condensable).
- Particulate (PM 2.5) - Particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers (includes filterable and condensable).
- Sulfur Oxides (SO_X) - Measured as sulfur dioxide (SO_2).
- Nitrogen Oxides (NO_X) - All oxides of nitrogen except nitrous oxide.
- Carbon Monoxide (CO) - Colorless, odorless, tasteless gas.
- Lead (Pb) – Metal.
- Volatile Organic Compounds (VOCs) - (See definition in 9 VAC 5-10-20). Do not include perchloroethylene as a VOC, but list it as a hazardous air pollutant (HAP) on page 21 of the Form 7 Application. The following common compounds are currently exempt from the definition of VOC (however, items 4 and 5 below are still to be reported as toxic pollutants page 21):

  1. Acetone
  2. Methane
  3. Ethane
  4. 1,1,1-trichloroethane (methyl chloroform)
  5. Methylene chloride
  6. Trichlorofluoromethane (CFC-11)
  7. Dichlorodifluoromethane (CFC-12)
  8. Chlorodifluoromethane (HCFC-22)
  9. Trifluoromethane (HFC-23)
  10. 1,1,2-trichlorotrifluoroethane (CFC-113)
  11. 1,2-dichlorotetrafluoroethane (CFC-114)
  12. Chloropentafluoroethane (CFC-115)
  13. Dichlorotrifluoroethane (HCFC-123)
  14. Tetrafluoroethane (HFC-134a)
  15. Dichlorofluoroethane (HCFC-141b)
  16. Chlorodifluoroethane (HCFC-142b)

AVERAGE ACTUAL ANNUAL EMISSIONS TO THE ATMOSPHERE OF CRITERIA POLLUTANTS - The method of calculating BAE varies for Electric Utility Steam Generating Units (EUSGU) and for all other types of emissions units (non-EUSGU).

BAE for an existing EUSGU: BAE for an existing EUSGU is defined as the average actual emissions (in tpy) calculated over a consecutive 24-month period of actual operation, within the 5-year period immediately preceding when the owner *begins actual construction* on the project. A 24-month period outside of the aforementioned 5-year period may be used upon a determination by the DEQ Regional Office that it is more representative of normal source operation (please provide documentation to support such claim).

The criteria for determining BAE for an existing EUSGU, is as follows:

- Include all fugitive emissions to the extent quantifiable and all emissions associated with start-up, shutdown and malfunction.

- Adjust the calculated average emission rate to account for non-compliant emissions. Adjust it downward for periods during the 24-months when actual emissions exceeded an emission limitation that applied during the 24-month period. The actual emissions used in the calculation may not exceed enforceable emission limits.

- When a project involves multiple emissions units, only one consecutive 24-month period should be used for all affected units (including debottlenecked units) in determining BAE for a regulated NSR pollutant. The same consecutive 24-month period should be used for each different regulated NSR pollutant unless the source can demonstrate to the satisfaction of the Regional Office that an alternative consecutive 24-month period for a different pollutant or pollutants is more appropriate due to extenuating circumstances. The source must provide documentation to support such claim.

- BAE may not be established using any consecutive 24-month period for which there is inadequate information to determine actual annual emissions in tpy and for adjusting this amount. If documentation is missing or incomplete for any part of the selected 24-month period, a different consecutive 24-month period must be selected.

BAE for an existing non-EUSGU: BAE for an existing non-EUSGU is defined as the average actual emissions (in tpy) calculated over a consecutive 24-month period of actual operation, within the 5-year period immediately preceding either the date the owner *begins actual construction* on the project or the date a complete application for the proposed project is received, whichever is earlier. A 24-month period outside of the aforementioned 5-year period may be used upon a determination by the DEQ Regional Office that it is more representative of normal source operation (please provide documentation to support such claim).

The criteria for determining BAE for an existing non-EUSGU, is as follows:

- Include all fugitive emissions to the extent quantifiable and all emissions associated with start-up, shutdown and malfunction.

- Adjust the calculated average emission rate to account for non-compliant emissions. Adjust it downward for periods during the 24-months when actual emissions exceeded an emission limitation that applied during the 24-month period. The actual emissions used in the calculation may not exceed enforceable emission limits.

- Adjust the calculated average emission rate downward to exclude emissions that would have exceeded an emission limitation with which the facility must currently comply.

- When a project involves multiple emissions units, only one consecutive 24-month period should be used for all affected units (including debottlenecked units) in determining BAE for a regulated NSR pollutant. The same consecutive 24-month period should be used for each different regulated NSR pollutant unless the source can demonstrate to the satisfaction of the DEQ Regional Office that an alternative consecutive 24-month period for a different pollutant or pollutants is more appropriate due to extenuating circumstances (please provide documentation to support such claim).

- BAE may not be established using any consecutive 24-month period for which there is inadequate information to determine actual annual emissions in tpy and for adjusting this amount. If documentation is missing or incomplete for any part of the selected 24-month period, a different consecutive 24-month period must be selected.

BAE for a new emissions unit: When a new unit (a unit that has existed for less than 2 years) is changed by a project, the *baseline actual emissions* rate is zero if it has not yet begun operation and is equal to the unit's PTE once it has begun to operate.

XXVI. Page 26 – Baseline Actual Emissions (BAE) for Greenhouse Gases (GHGs) Pollutant Emissions on Mass Basis

IMPORTANT NOTICE: THIS PAGE IS FOR PSD MAJOR SOURCES ONLY!

Please see 9 VAC 5 Chapter 85 for more information on Greenhouse Gases.

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

AVERAGE ACTUAL ANNUAL EMISSIONS TO THE ATMOSPHERE OF GHGs – The method of calculating BAE for GHGs is the same as that for criteria pollutant emissions.

XXVII. Page 27 - Baseline Actual Emissions (BAE) for Greenhouse Gases (GHGs) Pollutant Emissions on CO_2 Equivalent Emissions (CO_2e) Basis

IMPORTANT NOTICE: THIS PAGE IS FOR PSD MAJOR SOURCES ONLY!

Please see 9 VAC 5 Chapter 85 for more information on Greenhouse Gases.

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

AVERAGE ACTUAL ANNUAL EMISSIONS TO THE ATMOSPHERE OF GHGs – Convert the previously calculated BAE on mass basis to CO_2e basis using GHG compounds associated global warming potential (GWP) published at Table A-1 to Subpart A of 40 CFR Part 98. The following example below illustrates this.

EXAMPLE:

BAE on mass basis for GHG compounds are following:

50,000 tons/yr (TPY) of CO_2
60 TPY of Methane
1 TPY of Nitrous Oxide
5 TPY of HFC-32 (a hydrofluorocarbon)
3 TPY of PFC-14 (a perfluorocarbon)

Total BAE on mass basis = 50,000 + 60 + 1 + 5 + 3 = 50,069 TPY

The GWP *(see 40 CFR Part 98, Subpart A, Table A-1)* for each of the GHGs used in this example are:

GHG	GWP
Carbon Dioxide	1
Nitrous Oxide	310
Methane	21
HFC-32	650
PFC-14	6,500

BAE on CO_2e basis for the GHG compounds are calculated below:

Carbon Dioxide:	50,000 TPY x 1 = 50,000 TPY CO_2e
Nitrous Oxide:	1 TPY x 310 = 310 TPY CO_2e
Methane:	60 TPY x 21 = 1,260 TPY CO_2e
HFC-32:	5 TPY x 650 = 3,250 TPY CO_2e
PFC-14:	3 TPY x 6,500 = 19,500 TPY CO_2e

Total BAE on CO_2e basis = 50,000 + 310 + 1,260 + 3,250 + 19,500 = 74,320 TPY

XXVIII. Page 28 – Operating Periods

UNIT REF. NO. - Continue assigned reference number(s) from previous page(s).

PERCENT ANNUAL USE/THROUGHPUT BY SEASON - Give the percentage of time the process or equipment was operated (past five years), by the indicated seasons. Do the same for the proposed operation.

NORMAL PROCESS/EQUIPMENT OPERATING SCHEDULE - Indicate the normal operating schedule expected for the process equipment.

MAXIMUM PROCESS/EQUIPMENT OPERATING SCHEDULE - Indicate the maximum operating schedule expected for the process/equipment.

MAXIMUM FACILITY OPERATING SCHEDULE - Indicate the maximum number of hours of operation for the entire facility.